

1-7 Inverse Functions Practice

Date _____ Period _____

State if the given functions are inverses.

$$1) \quad h(n) = -\frac{2}{n-1} - 2$$
$$f(n) = -\frac{3}{-n+3} - 2$$

$$2) \quad g(x) = \sqrt[5]{x} + 3$$
$$f(x) = (x-3)^5$$

$$3) \quad g(x) = 3 + \frac{1}{2}x$$
$$f(x) = \frac{-5x-25}{7}$$

$$4) \quad g(n) = 2n^3$$
$$f(n) = \sqrt[3]{\frac{n}{2}}$$

$$5) \quad f(x) = 2 + (x-1)^3$$
$$h(x) = -\sqrt[3]{x} + 2$$

$$6) \quad g(x) = \frac{6-x}{3}$$
$$f(x) = -3x + 6$$

Find the inverse of each function.

$$7) g(x) = \frac{2}{x-1} + 2$$

$$8) f(x) = \sqrt[3]{x+1} + 1$$

$$9) g(n) = -2n + 1$$

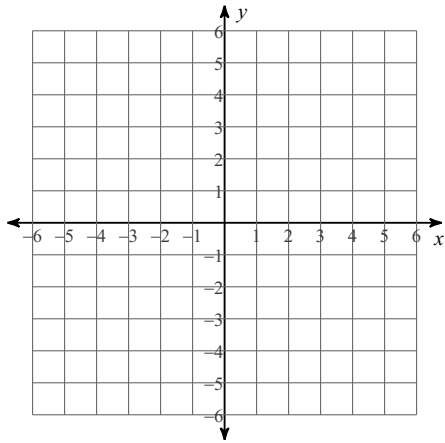
$$10) f(x) = -\frac{1}{2}x$$

$$11) g(n) = -2n - 3$$

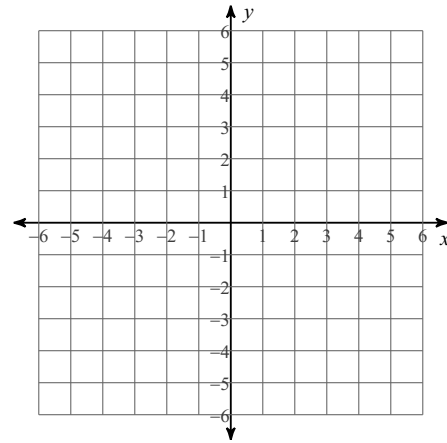
$$12) f(x) = -(x-2)^3$$

Find the inverse of each function. Then graph the function and its inverse. Please sketch the mirror line on your graph using a dotted line.

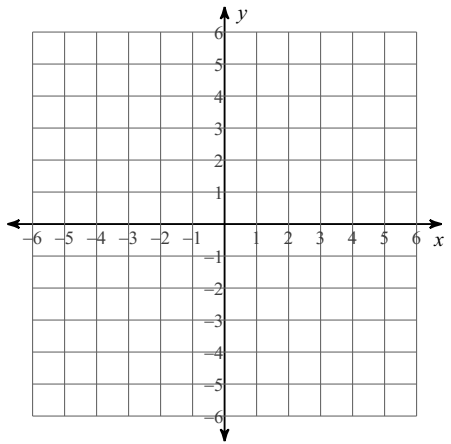
13) $g(x) = \frac{1}{x}$



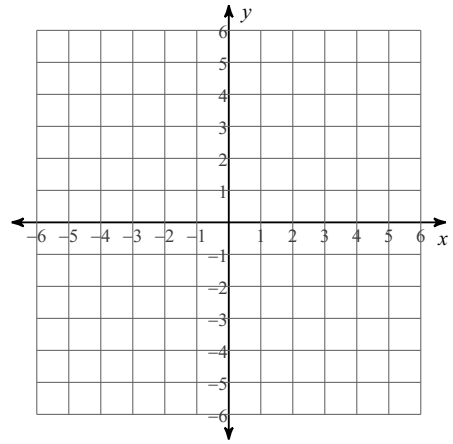
14) $f(x) = -\frac{1}{5}x$



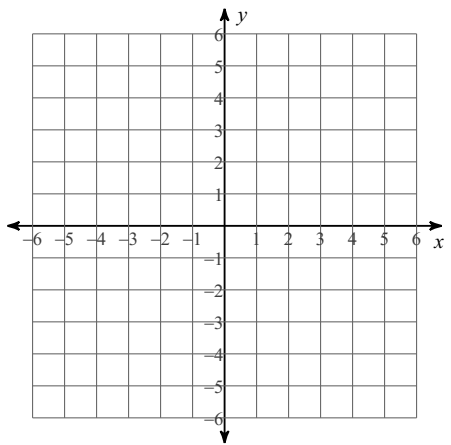
15) $g(x) = -2 - 2x^3$



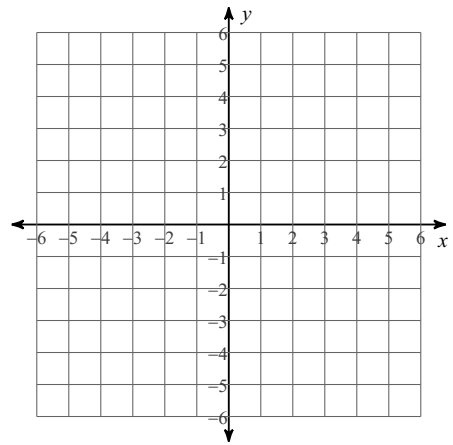
16) $g(n) = n + 3$



17) $g(n) = \sqrt[3]{\frac{-n + 2}{2}}$



18) $g(n) = -5n + 10$



Answers to 1-7 Inverse Functions Practice (ID: 1)

1) No
5) No

2) Yes
6) Yes

3) No

4) Yes

$$7) g^{-1}(x) = \frac{2}{x-2} + 1$$

$$8) f^{-1}(x) = (x-1)^3 - 1$$

$$9) g^{-1}(n) = -\frac{1}{2}n + \frac{1}{2}$$

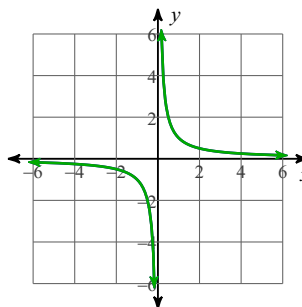
$$10) f^{-1}(x) = -2x$$

$$11) g^{-1}(n) = \frac{-n-3}{2}$$

$$12) f^{-1}(x) = -\sqrt[3]{x} + 2$$

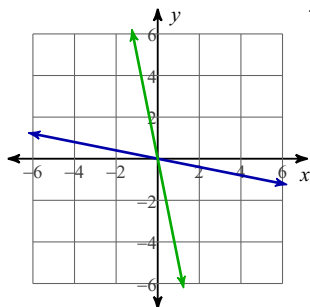
13)

$$g^{-1}(x) = \frac{1}{x}$$



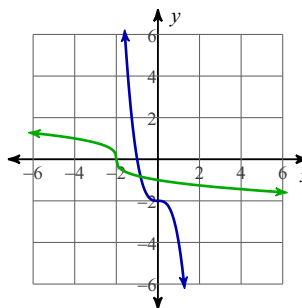
14)

$$f^{-1}(x) = -5x$$



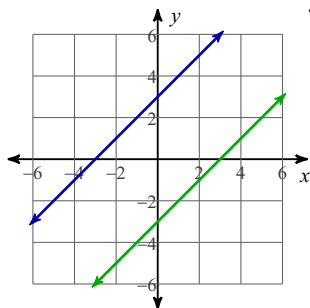
15)

$$g^{-1}(x) = \sqrt[3]{\frac{-x-2}{2}}$$



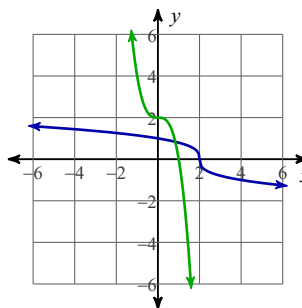
16)

$$g^{-1}(n) = n - 3$$



17)

$$g^{-1}(n) = -2n^3 + 2$$



18)

$$g^{-1}(n) = 2 - \frac{1}{5}n$$

